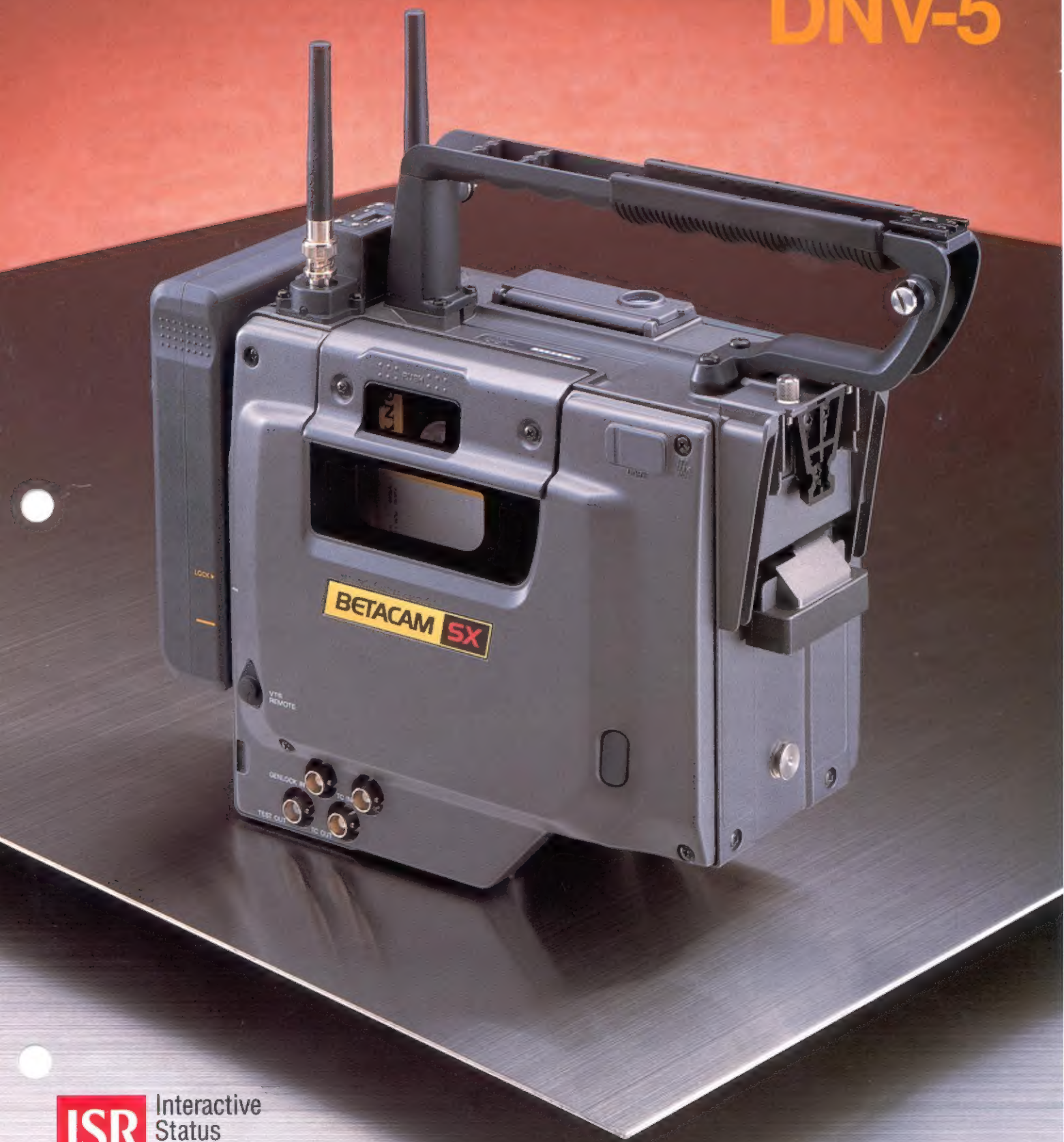
SONY

BETACAM SX™

Betacam SX™ Recorder Unit

DNV-5



ISR Interactive Status Reporting

Betacam SX™ Digital Quality — with Your Existing Camera Systems

The Sony Betacam SX system is designed to achieve superior picture quality, faster editing, increased system flexibility, and greater productivity in every aspect of news gathering and production compared to conventional analog systems. Based on MPEG2 4:2:2 Profile at Main Level (MPEG2 4:2:2P@ML), the Betacam SX system brings extraordinary advantages to the broadcast industry: an advanced compression algorithm, dramatic reductions in equipment size and operating costs, the speed and creativity of non-linear disk-based editing, and the power of a total digital network.

The DNV-5 Betacam SX Dockable VTR is designed to bring all the quality and flexibility of digital acquisition to existing camera systems.

This dockable Betacam SX VTR achieves superior digital pictures in the field. Any camera with a standard 50-pin Betacam® interface can be used with the DNV-5, allowing a smooth transition from current analog Betacam SP® format to digital Betacam SX format. Analog Betacam SP metal tapes can be used for Betacam SX recording with the DNV-5, so tape is readily available and inexpensive to purchase. And by attaching the CA-701 Camera Adaptor, the DNV-5 will output SDI (Serial Digital Interface) signals for connection to digital studio equipment.

The Sony DNV-5 Dockable VTR lets you move ahead into the age of digital field acquisition, without sacrificing your investment in existing equipment.

Broadcast Picture Quality with MPEG2 4:2:2P@ML

The DNV-5 Dockable VTR delivers the superior digital picture quality of the Betacam SX format, recording 8-bit, 4:2:2 component digital signals using an advanced compression algorithm.

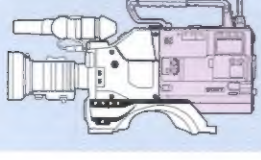
Betacam SX recordings maintain high-quality pictures without visible artifacts. The 10:1 compression allows high-speed transmission from the field to the broadcast station, followed by cost-effective digital non-linear editing and archival storage. Betacam SX picture quality exceeds that of Betacam SP format, and also supports 4-channel, 16-bit/48kHz digital audio.

Betacam SX digital recordings preserve 507(525/60) or 608(625/50) active lines per frame along with vertical blanking signal information. Powerful ECC (Error Correction Code) technology implemented within the Betacam SX format allows the use of current Betacam SP metal tapes for virtually dropout-free recording — with a longer recording capacity of 60 minutes on a single S-cassette.

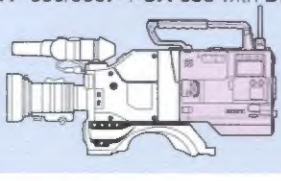
- **525/60, 625/50 Switchable:** the DNV-5 can be switched to operate on either 525/60 or 625/50, to match the dockable camera system.
- **Compact and Lightweight Design:** weighs just 2.9kg (6 lb 6 oz).
- **Field Playback Capability:** full color video and audio playback without an adaptor.
- **Longer Operating Time:** up to 105 minutes of operating time with a fully charged BP-L60 Lithium-ion Battery.
- **Longer Recording Time:** up to 60 minutes of digital Betacam SX recording on a single S-cassette.
- **Uses Betacam SP Tapes:** conventional analog Betacam SP metal particle tapes (BCT-MA/UVWT) can

System Configurations

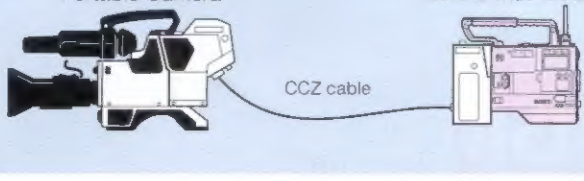
❶ Portable camera with Betacam 50-pin with **DNV-5**



❷ **BVP-550/550P** + **CA-553** with **DNV-5**



❸ Portable Camera — CCZ cable — **DNV-5** with **VA-5/5P**



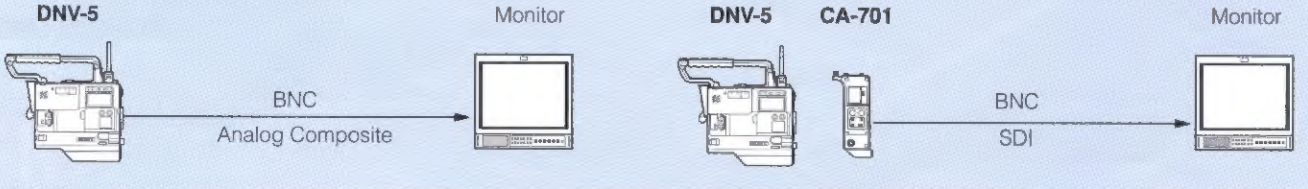
be used with the DNV-5, assuring wide availability of recording media — and with the DNV-5, recording time is almost double the stated duration of the tape.

- **Newly Developed Betacam SX Tape:** achieves even higher performance and cost efficiency compared to conventional Betacam SP tapes.
- **Shot Data Recording Capability:** the DNV-5 is able to record shot details onto tape. Date, Time, Shot ID, Cassette Number, and Shot Number can all be recorded according to the user's needs.
- **Good Shot Marker and REC Start Marker:** recording with the DNV-5 allows Good Shot and REC Start markers to be placed on tape to speed the edit search process. These markers appear as picture stamps on the GUI of the DNE-50 Digital Editing System during editing with the DNW-A100/A100P Hybrid Recorder, increasing post production productivity.
- **Slot-in Wireless Microphone Receiver:** an optional WRR-855A Slot-in Wireless Microphone Receiver can be inserted into the DNV-5, reducing the size and weight of the equipment needed in the field.
- **Internal Light System:** an optional Anton/Bauer Ultralight* can be connected to the DNV-5 and powered from its internal power supply. Switching of the lamp can be synchronized with the REC Start/Stop function of the VTR.

*Anton/Bauer products may not be available in some countries.

- **Versatile Camera Adaptor:** the optional CA-701 Camera Adaptor provides the DNV-5 with the ability to output SDI signals as well as 4-channel audio input.
- **REC/Review Function:** automatically backs up the tape and plays back the end of the previous scene, so that recording functionality can be checked.
- **High Reliability:** rugged, durable construction and easy maintenance. Operational warning indicators are located on the LCD panel.
- **TC REGEN Function:** allows continuity of time code recording.
- **Stereo Audio Line Out:** the DNV-5 is equipped with a 5-pin XLR output connector.
- **Fail-safe Audio Recording:** even if an external microphone is not connected, audio from the front connector and the output of the wireless microphone will still be captured on audio channels 3 and 4.
- **Robust Cassette Compartment:** newly designed, vertical cassette compartment mechanism minimizes ingress of dust.
- **Low Acoustic Noise:** to protect camera operators and reduce pick-up by sensitive microphones.
- **Comprehensive LCD Display:** extensive display provides VTR operating status indication for Time Code, CTL and User-bit data, Tape Remaining and Battery Capacity. A digital audio peak meter allows precise recording level adjustments to be made.

Field Playback Capability



Specifications

General	
Power requirements	DC 12V +5.0V/-1.0V
Power consumption	20W
Operating temperature	0°C to +40°C (+32°F to +104°F)
Storage temperature	-20°C to +60°C (-4°F to +140°F)
Humidity	25% to 85% (relative humidity)
Mass	Approx. 2.9kg (6 lb 6 oz)
Recording format	Betacam SX
Tape speed	59.6mm/s
Playback/recording time	Max. 60 min. with BCT-60SX cassette
Fast forward time	Approx. 5.5 min. with BCT-60SX
Rewind time	Approx. 5 min. with BCT-60SX
Continuous operating time	Approx. 105 min. with BP-L60 (BVP-90/90P and DNV-5)

Signal inputs	
Video (from the camera head)	50-pin Luminance: 1.0Vp-p, 1kΩ Chrominance B-Y/R-Y: 0.7Vp-p, 1kΩ
Genlock video	BNC (x1), 1.0Vp-p, 75Ω
Time code input	BNC (x1), 0.5 to 18Vp-p, 10kΩ
Audio (CH-1/2)/ Mic	XLR-3-31 type (x2), -60dBu/+4dBu selectable, high impedance, balanced

Signal outputs	
Video output	BNC (x1), 1.0Vp-p, 75Ω, sync negative
Test output	BNC (x1), 1.0Vp-p, 75Ω, sync negative
Time code output	BNC (x1), 1.0Vp-p, 75Ω
Earphone	Mini-jack
Audio output	XLR 5-pin male (stereo)

Others	
Remote	6-pin
Light	2-pin, DC 12V, max. 30W
DC input	XLR 4-pin (for the optional AC-550/550CE)
DC output	4-pin (for wireless microphone receiver) DC 12V

Video performance	
Sampling frequency	Y: 13.5MHz R-Y/B-Y: 6.75MHz
Quantization	8 bits/sample
K-factor (2T pulse)	Less than 2%
Y/R-Y/B-Y delay	Less than 20ns

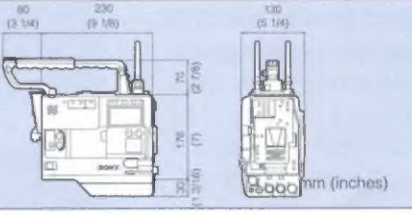
Digital audio performance	
Sampling frequency	48kHz
Quantization	16 bits/sample
Frequency response	20Hz to 20kHz +0.5dB/-1.0dB
Dynamic range	More than 85dB
Distortion T.H.D.	Less than 0.08%
Cross talk	Less than -70dB
Wow and flutter	Below measurable level
Head room	20dB
Emphasis (ON/OFF selectable)	T1 = 50µs, T2 =15µs

The specifications given above were measured by CA-701.

Supplied accessories

- 50-pin connector cap (1)
- Shoulder belt (1)
- Maintenance manual (1)
- Operation manual (1)
- BNC cap (5)
- XLR cap 1 (2)
- XLR cap 2 (2)

Dimensions



Optional Accessories

Rechargeable Lithium-ion Battery
BP-L60/L90

AC Adaptor
AC-DN1

Battery Charger for four BP-L60 and BP-L90 Batteries
BC-L100/L100CE

AC Adaptor
AC-550/550CE

Slot-in Wireless Microphone Receiver
WRR-855A

Camera Adapter
CA-701

Carring Case
LC-DN5

Betacam SX Video Cassette
BCT-12SX/22SX/32SX/60SX

Battery Case for an optional BP-90A NiCd Battery
DC-L90

Battery Case for an optional NP-1B NiCd Battery
DC-L1

Video Head Cleaning Cassette
BCT-D12CL

Battery Charger for four NP-1B Batteries
BC-1WD/1WDCE

Battery Charger for four BP-90A and four NP-1B Batteries
BC-410/410CE

Video Head Cleaning Cassette
BCT-5CLN

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